

DATA VERIFICATION OF THE OU-4B AND OU-5 SOIL INVESTIGATION
METEORIC WATER MOBILITY PROCEDURE (MWMP) SAMPLES
COLLECTED AT THE ANACONDA COPPER MINE SITE IN YERINGTON, NEVADA
ON JANUARY 22, 23, 24 AND 27, 2020

Laboratory: ACZ Laboratories, Inc.

Samples:

Field Sample Identification	Date Sample Collected	SDG	Parameters Examined
WRSB206_145-155	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB206_175-182	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB206_187-192	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB206_197-202	1/27/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_0.5-3	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_6-15	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_25-35	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_65-75	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_105-115	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_125-135	1/22/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_140-145	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB207_150-155	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB234_0.5-3	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB234_6-15	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra

Field Sample Identification	Date Sample Collected	SDG	Parameters Examined
WRSB223_0.5-3	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB223_6-15	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB228_0.5-3	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB228-FD_0.5-3 (Field Duplicate of WRSB228_0.5-3)	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB228_6-15	1/23/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra
WRSB227_0.5-3	1/24/20	L57215	M ¹ , M ² , Hg, CN, Cl, F, SO ₄ , N, TKN, ALK, TDS, ²²⁶ Ra, ²²⁸ Ra

Parameters & Methods:

- M¹ - ICP Metals (specifically, aluminum, barium, boron, calcium, iron, lithium, magnesium, phosphorus, potassium, sodium, strontium, tin, and titanium) by SW-846 Method 6010D.
- M² - ICP/MS Metals (specifically, antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, molybdenum, nickel, selenium, silver, thallium, thorium, uranium, vanadium, and zinc) by SW-846 Method 6020B.
- Hg - Mercury by SW-846 Method 7470.
- CN - Cyanide, Weak Acid Dissociable (WAD) by Standard Method 4500-CN I.
- Cl - Chloride by Standard Method 4500-Cl E.
- F - Fluoride by Standard Method 4500-F C.
- SO₄ - Sulfate by ASTM Method D516-07.
- N - Nitrate Nitrogen, Nitrite Nitrogen, and Nitrate/Nitrite Nitrogen by US EPA Method 353.2.
- TKN - Total Kjeldahl Nitrogen by US EPA Method 351.2.
- ALK - Total Alkalinity, Bicarbonate Alkalinity, Carbonate Alkalinity, and Hydroxide Alkalinity as CaCO₃ by Standard Method 2320B.
- TDS - Total Dissolved Solids by Standard Method 2540C.
- ²²⁶Ra - Radium-226 by US EPA Method 903.1 (modified).
- ²²⁸Ra - Radium-228 by SW-846 Method 9320.

Items Reviewed
Holding Times
Chain-of-Custody and Case Narrative
Blank Results
MS/MSD Results
LCS Results
Laboratory and Field Duplicate Results
Chemical Yield

Qualifier Summary

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier(s)	Reason(s) for Qualification
nitrate nitrogen, nitrite nitrogen, and nitrate/nitrite nitrogen	L57215	All samples	J/UR	1 – Grossly exceeded holding time
boron	L57215	WRSB234_6-15, WRSB223_0.5-3, WRSB223_6-15, WRSB228_0.5-3, WRSB228-FD_0.5-3, WRSB228_6-15, and WRSB227_0.5-3	UJ	2 – Method blank contamination
fluoride	L57215	WRSB223_0.5-3	UJ	2 – Method blank contamination
radium-226	L57215	WRSB207_125-135, WRSB207_140-145, WRSB207_150-155, and WRSB234_6-15	UJ	2 – Method blank contamination
arsenic, uranium, and vanadium	L57215	WRSB207_105-115, WRSB207_125-135, WRSB207_140-145, WRSB207_150-155, WRSB234_0.5-3, WRSB234_6-15, WRSB223_0.5-3, and WRSB223_6-15	J	D – Laboratory duplicate imprecision
radium-226	L57215	WRSB228_0.5-3 and WRSB228-FD_0.5-3	J/UJ	8 – Field duplicate imprecision

Quantitation of Results: Based on standard project reporting requirements, all positive results reported at concentrations greater than the method detection limit but less than the reporting limit were qualified as estimated and have been flagged “J” on the data tables. (Valid Reason Code: T)

Based on standard project reporting requirements, all radium-226 and radium-228 results reported at concentrations less than the method detection limit were qualified as “not-detected” and have been flagged “U” on the data tables. (Valid Reason Code: 9)

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Date: July 20, 2020